

CLIMATOLOGICAL DATA FOR JUNE, 1913.

DISTRICT NO. 11, CALIFORNIA.

Prof. ALEXANDER G. MCADIE, District Editor.

GENERAL SUMMARY.

June, 1913, was the coolest June since 1897. The precipitation was above the average. On the whole the month was favorable for agriculture, although a heavier rainfall would have been beneficial. There were comparatively few periods of strong north wind, which was advantageous, for owing to the generally dry character of the season and the small supply of water the existence of such winds would have resulted in considerable loss. The snow in the mountains disappeared early, nearly two weeks earlier than during the preceding year, which itself was one of early disappearance. The supply of water is not abundant and the outlook for the long, dry summer is not favorable. In the mountains the season opened early, and passes not usually accessible until the middle of June were open for travel before the beginning of the month.

The month began with pressure distribution favorable for fair weather. There were, however, sporadic thunderstorms in the San Joaquin Valley and the Sierra foothills. A somewhat unsettled condition continued for 5 days and while there were no rains of consequence, there was considerable cloudiness with passing showers. From June 4th to 9th thunderstorms were frequent in the Sierra and eastward over the Great Basin. From the 10th to the 17th conditions were normal. Beginning with the 18th a well marked change in pressure distribution over the western half of the country took place. Unsettled weather prevailed on the Pacific slope, and there were light rains in northern California. This condition lasted for about 10 days. Light rains were frequent and there were no high afternoon temperatures. The winds were mostly south and the temperatures much below normal.

The month was without any feature of special interest.

TEMPERATURE.

The temperature for the State was 3° below the normal. The following table gives the mean temperature for California for each June during the time records have been kept:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	$^{\circ}F.$	$^{\circ}F.$		$^{\circ}F.$	$^{\circ}F.$
1897.....	69.8	+0.8	1906.....	66.7	-2.3
1898.....	71.3	+2.3	1907.....	66.1	-2.9
1899.....	71.5	+2.5	1908.....	66.0	-3.0
1900.....	71.4	+2.4	1909.....	68.1	-0.9
1901.....	70.5	+1.5	1910.....	67.3	-1.7
1902.....	70.2	+1.2	1911.....	66.7	-2.3
1903.....	70.9	+1.9	1912.....	68.0	-1.0
1904.....	71.1	+2.1	1913.....	65.8	-3.2
1905.....	67.5	-1.5			

The highest temperature recorded was 119° at Greenland Ranch on the 22d, which was 1° lower than the highest temperature recorded during the previous year

at the same station. Greenland Ranch is located in Death Valley, and temperatures may reasonably be expected to reach as high a degree here as at any point in the United States. The lowest temperature was 22° at Yosemite on the 10th.

PRECIPITATION.

The average precipitation for California for June with departures from the normal is as follows:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	Inches.	Inches.		Inches.	Inches.
1897.....	0.46	+0.15	1906.....	1.05	+0.74
1898.....	.25	-.06	1907.....	1.02	+.71
1899.....	.57	+.26	1908.....	.17	-.14
1900.....	.19	-.12	1909.....	.19	-.12
1901.....	.01	-.30	1910.....	.05	-.26
1902.....	.10	-.20	1911.....	.15	-.16
1903.....	.07	-.24	1912.....	.49	+.18
1904.....	.04	-.27	1913.....	.58	+.27
1905.....	.07	-.24			

The greatest monthly precipitation was 7.44 inches at Tamarack, which was 4.64 inches greater than the heaviest monthly rainfall reported during June, 1912, and more than 6 inches greater than the heaviest monthly rainfall reported during June, 1911. At 34 stations there was no rainfall.

SNOWFALL IN THE MOUNTAINS.

The snow was unusually light during the month. The ground was bare at an elevation of 7,000 feet two weeks earlier than during the preceding June. There is very little snow left at the higher elevations, and the outlook for water from this source is poor.

The following table gives the total hours of sunshine and percentages of possible:

Stations.	Hours.	Per cent of possible.	Stations.	Hours.	Per cent of possible.
Eureka.....	220	49	Sacramento.....	374	84
Fresno.....	390	89	San Diego.....	238	55
Los Angeles.....	245	57	San Francisco.....	279	63
Mount Tamalpais.....	368	83	San Jose.....	349	79
Red Bluff.....	323	72	San Luis Obispo.....	288	66

NOTES ON THE RIVERS OF THE SACRAMENTO AND LOWER SAN JOAQUIN WATERSHEDS DURING THE MONTH OF JUNE, 1913.

By N. R. TAYLOR, Local Forecaster.

Sacramento watershed.—Rainfall along the immediate course of the Sacramento River and in parts of the Feather-Yuba watershed exceeded the normal for the month. It was relatively heavy during the second decade in some of the upper reaches of the Sacramento and resulted in a slight swell in this stream which was felt as far down as the mouth of the American.

TABLE 1.—Climatological data for June, 1913. District No. 11, California.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Sky.	Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.								
Oregon.																						
Klamath Falls.	Klamath.	4,100	24	57.2	-1.9	82	1	36	20	36	2.54	+1.76	0.57	0	9	7	15	8	nw.		Augusta J. Hayden.	
Lakeview.	Lake.	4,825	30	54.3	-4.4	79	2	30	20	39	3.22	+2.12	0.96	T.	11	9	9	12	s.		C. C. Gott.	
Merrill.	Klamath.	4,070	8																			
Yonna.	do.	4,146	6	54.3		81	6	26	20	53	1.72		0.47	0	8	3	13	14	w.		Ward Rueck.	
California.																						
Alturas.	Modoc.	4,400	9	58.5		86	1†	29	20	51	2.20		0.75	0	11	13	12	5	sw.	Prof. C. Bowle.		
Angiola.	Tulare.	208	13	72.5	+0.1	99	30	41	30	55	0.20	+0.20	0.20	0	1	27	0	3	n.	Santa Fe Co.		
Antioch **.	Contra Costa.	86	34	70.9	-1.1	94	27	50	20	54†	0.00	-0.11	0.00	0	0	30	0	0		Southern Pacific Co.		
Aptos **.	Santa Cruz.	102	28	63.9	+1.4	84	2	50	11	50	0.25	+0.15	0.20	0	2	17	6	7	nw.	Do.		
Arrowhead Springs.	San Bernardino.	2,000	4	66.4		98	21	48	7†	39	1.10		0.55	0	3	19	9	2		Dr. E. J. Erickson.		
Auburn.	Placer.	1,360	42	67.1	-3.7	92	2	42	10	39	0.00	-0.44	0.00	0	0	24	3	3	ne.	Southern Pacific Co.		
Avalon.	Los Angeles.	30	3	62.2		82	30	54	10†	22	0.09		0.08	0	2	18	8	4	e.	T. S. Manning.		
Azusa.	do.	540	11	66.6	-1.4	99	21†	51	52	47	+0.47	+0.32	0.30	0	3	1	20	0	0		A. P. Griffith.	
Bagdad.	San Bernardino.	784	10	88.9	-1.3	110	23	68	10†	29	0.00	0.00	0.00	0	0	30	0	0		Santa Fe Co.		
Bakersfield.	Kern.	404	24	70.6	-8.2	99	5†	40	28	54	0.36	+0.33	0.36	0	1	27	0	3		E. L. White.		
Barstow.	San Bernardino.	2,105	10	73.8	-3.6	101	21†	48	9	45	0.05	+0.05	0.05	0	1	23	7	6	sw.	State University.		
Berkeley.	Alameda.	317	26	61.0	+0.1	84	30	46	9	31†	T.	-0.20	T.	0	0	12	12	6	w.	Union Sugar Co.		
Bettferavia.	Santa Barbara.	66.4		92	19	42	13	44	0.36		0.36		0.36	0	1	13	15	9	s.	Southern Pacific Co.		
Biggs **.	Butte.	98	14	68.3	-5.2	100	30	50	41†	0.11	-0.39	0.08	0.00	0	2	18	3	9		Paul E. Lodge.		
Bishop.	Inyo.	4,450	18	61.3	-6.4	91	21†	36	26†	51	0.00	-0.05	0.00	0	0	28	1	1		Do.		
Blocksburg.	do.	8,500	3	51.0		74	21	29	10†	32	2.75		1.00	T.	3	7	16	7				
Blue Canon.	Humboldt.	1,700	7	58.6		87	1	38	26	38	2.23		0.75	0	8	5	17	s.	Victor Hope.			
Blythe.	Riverside.	268	4	79.2	112	22	50	1	57	0.00		0.00	0	0	27	2	1	s.	Southern Pacific Co.			
Branscomb.	Mendocino.	2,000	13	56.1	-2.8	85	4	35	9†	41	0.86	-0.53	0.40	0	7	15	8	7	n.	C. L. Suits.		
Brawley.	Imperial.	165	4	80.4		107	21	51	9	41	0.00		0.00	0	0	30	0	0		M. D. Witter.		
Burney.	Shasta.	3,300	3	57.8		83	1†	32	20	45	2.78		1.50	0	7	10	10	10	nw.	Mrs. M. D. Chambers.		
Cahuilla.	Riverside.	3,000	2	58.5		93	21	31	11	52	0.10		0.10	0	1	20	10	0	sw.	Dr. W. L. Shawk.		
Calexico.	Imperial.	0	8																	J. E. Peck.		
Caliente **.	Kern.	1,200	37	69.6	-9.3	93	5	45	1	57	-0.25	0.05	0	0	3	14	8	3		Southern Pacific Co.		
Calistoga **.	Napa.	363	41	67.6	-2.0	90	27	50	1	57	-0.25	0.05	0	0	19	8	3		F. M. Righter.			
Campbell.	Santa Clara.	217	16	61.3	-0.8	87	29	40	10†	42	T.	-0.10	T.	0	0	5	15	10		Cal. Gas & Elect. Co.		
Camptonville (near).	Yuba.	3,500	6	62.8		86	40	10†	38	61	0.33	0.33	0	0	5	9	4	25	1	sw.	T. H. Johnstone.	
Cedarville.	Modoc.	4,675	19	59.4	-1.0	83	1†	33	11	41	1.97	+1.29	0.88	0	1	20	10	7	s.	G. H. Stephenson.		
Chico.	Butte.	189	43	72.5	-4.6	98	30	45	10	41	1.01	+0.60	0.88	0	3	16	7	5		O. I. Westerburg.		
China Flat.	Humboldt.	600	4	66.8		95	1†	42	9	42	1.09		0.40	0	8	13	14	3	sw.	Southern Pacific Co.		
Chino.	San Bernardino.	714	21																		Do.	
Cisco **.	Placer.	5,939	42	58.0	+3.0	80	21	41	27	0.63	-0.20	0.25	0	5	24	0	6			Do.		
Claremont.	Los Angeles.	1,200	21	66.2	+1.0	98	29†	44	11	49	0.16	+0.02	0.12	0	4	13	10	7	w.	Prof. F. P. Brackett.		
Cloverdale.	Sonoma.	340	11	66.2	-2.2	93	29	62	21	42	T.	-0.27	T.	0	0	23	4	3	w.	John O. Ogle.		
Coalinga.	Fresno.	663	1	72.7		97	13†	40	10	40	0.13		0.10	0	2	24	4	2	e.	Union Oil Co.		
Colfax.	Placer.	2,421	42	60.4	-10.8	82	1†	37	26	38	T.	-0.70	T.	0	0	20	0	10		Southern Pacific Co.		
Colusa.	Colusa.	60	10	69.8	-1.6	92	30	49	9†	37	0.12	-0.22	0.09	0	2	21	5	4	s.	C. D. McComish.		
Corning **.	Tehama.	277	27	78.8	+1.5	96	1	59	27	0.71	+0.55	0.30	0	4	15	11	4	s.	Southern Pacific Co.			
Cuyamaca.	San Diego.	4,677	14	59.0	-1.4	88	22	31	12	48	0.71	+0.46	0.71	0	1	23	2	5	s.	Cuyamaca Water Co.		
Davisville.	Yolo.	51	41	67.2	-7.6	98	30	38	10	48	0.07	-0.08	0.07	0	1	25	5	0	sw.	S. H. Beckett.		
Deer Creek.	Nevada.	3,700	6																		Cal. Gas & Elect. Co.	
Del Monte.	Monterey.	25	2	62.4		76	24	51	14	22	0.00		0.00	0	0	26	0	4	w.	H. R. Warner.		
Delta.	Shasta.	1,138	25	63.4	-8.1	95	11†	40	9†	45	2.41	+1.07	1.01	0	4	22	0	8	s.	Southern Pacific Co.		
Denair.	Stanislaus.	126	13	69.6	-2.0	96	30	48	10†	38	0.10	+0.01	0.10	0	1	23	0	7		Santa Fe Co.		
De Sabla.	Butte.	2,500	9	62.6		86	1	40	10†	42	1.51		1.07	0	4	14	16	0	sw.	Cal. Gas & Elect. Co.		
Dobbins (near).	Yuba.	1,650	9	68.4		90	20†	48	10†	38	0.47		0.19	0	4	11	19	5	s.	Do.		
Downieville.	Sierra.	3,150	2	61.0		87	5	35	20	50	1.54		0.42	0	9	13	12	5	s.	J. T. Mason.		
Dudley.	Kings.	595	73	73.3		103	30	40	9	45	0.70		0.55	0	2	19	9	2	sw.	Union Oil Co.		
Dudleys (near).	Mariposa.	3,000	4	57.9		84	30	33	10	45	0.69		0.60	0	3	13	8	9	nw.	W. H. Dudley.		
Dunigan **.	Fresno.	2,800	1	60.2		89	30	37	8†	34	0.80		0.46	0	3	19	6	5		U. S. Forest Service.		
Dunsmuir **.	Siskiyou.	65	36	79.3	+1.4	96	30	62	9†	37	0.10	-0.10	0.10	0	1	22	1	2	n.	Southern Pacific Co.		
Durham.	do.	2,285	24	64.2	-9.1	92	2	47	27	0.57	2.57	+1.63	0.74	0	11	16	0	14		Do.		
El Cajon.	Butte.	160	18	71.2	-1.4	95	1†	48	15	40	0.58	+0.57	0.25	0	4	14	8	8	s.	R. W. Durham.		
Electra.	San Diego.	482	14	65.2	-2.0	95	29	47	1	44	0.10	-0.01	0.10	0	1	29	0	1	sw.	H. H. Kessler.		
Emigrant Gap.	Amador.	725	9	69.8		96	30	50	16	36	0.02		0.01	0	2	24	6	0		Cal. Gas & Elect. Co.		
Escondido.	Placer.	5,230	39	66.2	-3.3	78	21	30	10	34	0.21	-0.85	0.11	0	3	20	0	10		Southern Pacific Co.		
Eureka.	San Diego.	637	19	66.8	-1.4	94	20†	42	11	44	0.10	0.00	0.05	0	2	8	19	3	w.	A. R. Moon.		
Farmington **.	San Joaquin.	111	34	74.0		80	3	41	29	35	0.00	-0.14	0.00	0	0	24	6	0	nw.	Southern Pacific Co.		
Folsom.	Sacramento.	252	41	75.0	+0.9	100	30	55	7	35	T.	-0.23	T.	0	0	17	1	12	s.	F. O. Hutton.		
Fordyce Dam.	Nevada.	6,500	18	55.5		80	3	41	29	35	2.14	+0.37	0.65	0	12	19	13	7	sw.	E. E. Roening.		
Fort Bidwell.	Modoc.	4,725	24	58.8	-5.4	84	3	33	20	41	2.31	+1.28	0.90	0	8	9	11	10	sw.	C. R. DeGros.		
Fouts Springs.	Fresno.	293	26	72.0	-3.8	97	30	50	10	36	0.10	0.00	0.06	0	2	17	9	4	nw.	U. S. Weather Bureau.</td		

TABLE 1.—Climatological data for June, 1913. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>California—Continued.</i>																				
Independence.	Inyo.	3,907	17	67.0	- 6.4	92	21†	42	28	39	0.21	+ 0.17	0.14	0	4	13	12	5	U. S. Weather Bureau.	
Indian Wells.	Kern.	2,500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	I. D. McCoy.	
Indio.	Riverside.	—	20	35	83.3	- 5.0	111	21	60	10	37	0.00	0.00	0.00	0	0	22	8	0	nw.
Inskip.	Butte.	4,075	6	56.4	—	76	4	40	2†	34	1.93	—	1.14	0	6	5	10	15	Cal. Gas & Elect. Co.	
Iron **.	Amador.	287	—	75.4	+ 1.8	97	30	56	7	0.00	- 0.26	0.00	0.00	0	0	23	1	6	Southern Pacific Co.	
Jamestown.	Tuolumne.	1,471	10	64.8	- 3.4	96	30	38	7	51	0.00	- 0.24	0.00	0	0	21	2	2	Sierra Railway Co.	
Kennett.	Shasta.	730	1	71.1	—	100	3	48	15†	41	1.71	—	0.47	0	6	10	20	0	C. H. Kremers.	
Kentfield.	Marin.	65	25	64.0	—	92	29	44	11†	41	T.	- 0.47	T.	0	0	21	6	3	Miss M. E. Parsons.	
King City.	Monterey.	333	26	62.7	- 0.9	100	24	34	18	60	0.18	+ 0.16	0.18	0	1	29	0	1	Southern Pacific Co.	
Lake Eleanor.	Tuolumne.	4,700	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	O. J. Todd.	
La Porte.	Plumas.	5,000	19	53.2	- 3.0	76	3	35	14†	36	1.00	- 0.60	0.33	0	7	11	15	4	C. W. Hendel.	
Le Grand.	Merced.	255	13	70.0	- 2.9	98	30	40	29	52	0.10	+ 0.10	0.10	0	1	25	0	5	Santa Fe Co.	
Lemon Cove.	Tulare.	600	18	74.4	- 1.6	101	30	49	10†	46	0.46	+ 0.37	0.46	0	1	11	17	2	W. R. Park.	
Lick Observatory.	Santa Clara.	4,209	24	55.2	- 4.8	74	12	34	9	22	0.07	- 0.33	0.03	0	4	16	6	8	The Director.	
Livermore.	Alameda.	485	42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	E. G. Still.	
Lone Pine.	Inyo.	2,728	8	66.2	—	94	23†	44	31	48	0.29	—	0.10	0	5	17	11	2	G. F. Marsh.	
Long Valley.	Lassen.	4,400	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	A. G. Evans.	
Los Angeles.	Los Angeles.	293	36	64.4	- 0.1	90	29	52	10	29	0.58	+ 0.48	0.58	0	2	12	8	10	U. S. Weather Bureau.	
Los Banos **.	Merced.	121	26	68.3	- 7.1	92	21†	54	10	T.	- 0.08	T.	0	0	13	0	17	w.		
Los Gatos.	Santa Clara.	600	26	64.1	- 0.7	91	29	43	97	42	0.06	- 0.03	0.06	0	1	25	3	2	F. H. McCullagh.	
McCloud.	Siskiyou.	3,410	3	57.6	—	87	2†	33	10	44	2.77	—	1.06	0	11	13	14	3	F. F. Spencer.	
Macdoel.	do.	4,528	8	52.4	—	85	3	32	20	39	0.71	—	0.50	0	6	15	1	4	Butte Valley Land Co.	
Madeline.	Lassen.	5,270	4	53.8	—	78	2	27	20	44	2.50	—	0.70	0	9	9	13	8	J. H. Williams.	
Magalia.	Butte.	2,321	9	62.6	—	91	1	41	10	36	0.58	—	0.30	0	2	17	11	2	Butte County R. R. Co.	
Mammoth Tank.	Imperial.	257	35	85.8	- 6.7	112	21	62	10†	44	0.00	0.00	0.00	0	0	30	0	0	Southern Pacific Co.	
Maricopa.	Kern.	640	2	73.9	—	98	30	52	9	33	0.38	—	0.38	0	1	19	9	2	Union Oil Co.	
Marysville.	Yuba.	67	42	72.0	- 4.2	99	1	48	14	42	T.	- 0.27	T.	0	0	19	0	11	Southern Pacific Co.	
Mecca.	Riverside.	-185	7	82.4	—	110	21	59	10†	43	0.00	—	0.00	0	0	27	3	0	E. A. Palmer.	
Menlo Park **.	San Mateo.	64	35	63.8	- 2.5	74	2†	56	25	T.	- 0.15	T.	0	0	18	9	3	Southern Pacific Co.		
Merced.	Merced.	173	39	70.2	- 5.1	95	22	47	10	39	0.18	+ 0.06	0.10	0	3	22	1	7	Santa Fe Co.	
Middlewater.	Kern.	803	2	77.2	—	98	30	51	2†	34	0.43	—	0.43	0	1	2	12	4	Union Oil Co.	
Mill Creek (1).	Amador.	2,500	6	58.4	—	79	30	39	97	36	1.22	—	1.15	0	0	20	10	0	Cal. Gas & Elect. Co.	
Milton (near).	Calaveras.	660	22	69.1	- 2.7	97	30	47	7†	42	T.	- 0.25	T.	0	0	10	0	0	J. H. Southwick.	
Modesto **.	Stanislaus.	90	41	66.9	- 9.7	92	6†	50	8	—	0.00	- 0.11	0.00	0	0	29	0	1	Southern Pacific Co.	
Mojave.	Kern.	2,751	36	71.2	- 6.3	98	12†	50	10	—	0.00	- 0.04	0.00	0	0	20	10	0	Do.	
Mokelumne Hill.	Calaveras.	1,550	20	66.1	- 2.0	92	30	43	10	34	T.	- 0.41	T.	0	0	15	1	14	C. E. Prindle.	
Mono Ranch.	Ventura.	3,210	7	62.0	—	92	1	34	10	50	1.22	+ 1.10	0.50	0	4	18	2	10	Herbert Lathrop.	
Montague.	Siskiyou.	2,450	25	62.3	- 4.6	92	1	39	10	45	4.21	+ 3.58	0.90	0	10	4	10	16	I. E. Deboy.	
Monterey **.	Monterey.	15	48	65.0	+ 4.2	80	19†	54	7†	0.13	+ 0.03	0.13	0	1	28	2	0	Southern Pacific Co.		
Monterio.	Kern.	4,500	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	John C. Knecht.		
Mount Tamalpais.	Marin.	2,375	14	56.7	- 7.4	78	29	41	9	21	0.04	- 0.08	0.02	0	3	16	10	4	U. S. Weather Bureau.	
Napa City.	Napa.	20	36	60.6	- 4.0	92	29	38	12	44	0.20	- 0.01	0.20	0	1	19	11	0	Alex. Hull.	
Napa (S. H.).	do.	60	35	65.6	- 0.2	90	21	46	9	34	0.20	- 0.01	0.20	0	1	13	12	5	A. R. Edgar.	
Needles.	San Bernardino.	477	21	86.6	- 0.7	107	23	60	2	36	0.00	- 0.01	0.00	0	0	27	3	0	Santa Fe Co.	
Nellie.	San Diego.	5,350	4	63.0	—	88	19†	40	10†	40	1.09	—	1.04	0	2	25	2	3	T. O. Bailey.	
Nevada City.	Nevada.	2,850	21	60.3	- 2.4	89	30	34	11†	48	1.12	+ 0.45	0.62	0	3	16	14	0	S. W. Marsh.	
Newhall **.	Los Angeles.	1,200	36	70.7	0.0	98	20	52	5†	51	0.18	+ 0.11	0.13	0	2	25	0	5	Southern Pacific Co.	
Newman.	Stanislaus.	91	24	73.8	+ 2.7	101	12†	47	16	51	0.10	+ 0.04	0.10	0	1	16	6	9	E. S. Wangenheim.	
North Bloomfield.	Nevada.	3,214	16	66.1	+ 1.1	84	29†	40	27	30	0.20	- 0.71	0.20	0	1	15	6	9	J. R. McIntosh.	
North Fork.	Madera.	3,000	9	63.0	—	90	22	37	10	39	1.38	—	0.65	0	4	12	15	3	U. S. Forest Service.	
Oakdale **.	Stanislaus.	150	19	69.4	- 2.5	98	30	57	8†	T.	- 0.21	T.	0	0	23	1	1	Southern Pacific Co.		
Oak Grove.	San Diego.	2,751	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	B. L. Johnson.	
Oakland.	Alameda.	36	37	63.3	+ 1.8	84	21	49	10	32	T.	- 0.30	T.	0	0	14	8	8	Chabot Observatory.	
Oceanside.	San Diego.	60	3	65.0	—	77	29	54	10	20	0.16	—	0.14	0	2	14	11	5	H. D. Brodie.	
Ojai Valley.	Ventura.	900	7	64.6	- 5.7	97	17†	48	9	44	0.63	+ 0.29	0.48	0	4	15	9	2	U. S. Reclamation Service.	
Orland.	Glenn.	254	31	73.0	- 5.7	97	17†	48	9	44	0.63	+ 0.29	0.30	0	4	23	5	2	F. T. Hale.	
Oroville (near).	Humboldt.	520	10	70.2	- 0.6	104	1	46	14	46	2.76	+ 1.77	0.95	0	8	15	6	9	E. D. Fairchild.	
Palermo.	Butte.	250	29	71.0	- 3.5	97	30	42	2	47	0.44	+ 0.11	0.20	0	3	15	6	9	Western Pacific Co.	
Palm Spring **.	Riverside.	584	24	80.9	- 6.8	110	21†	62	1	—	0.00	0.00	0.00	0	0	30	0	0	Southern Pacific Co.	
Pasadena.	Los Angeles.	827	23	65.2	- 5.4	95	29	44	11	44	0.76	+ 0.75	0.55	0	3	15	6	9	E. D. Sorver.	
Paso Robles.	San Luis Obispo.	800	26	64.4	- 3.8	100	23	37	9	49	0.15	+ 0.12	0.15	0	1	24	4	2	Dr. F. W. Sawyer.	
Peacefulland.	San Luis Obispo.	190	17	61.4	- 2.5	92	30	43	10†	45	0.07	- 0.31	0.07	0	1	23	6	1	E. H. Parnell.	
Petaluma.	do.	61.4	—	88	29	40	11	43	0.01	—	0.01	—	0.01	0	1	17	12	1	John Landis.	
Placererville.	Eldorado.	1,875	24	63.8	- 2.6	88	29†	42	10†	44	0.02	- 0.64	0.02	0	1	14	7	9	A. E. May.	
Point Lobos.	San Francisco.	250	20	56.3	0.0	70	21	49	5†	17	0.01	- 0.13	0.01	0	1	2	12	3	15	John Hyslop.
Point Reyes.	Marin.	490	21	53.8	+ 1.0	63	18	47	6	12	0.04	- 0.21	0.03	0	2	9	1	20	U. S. Weather Bureau.	
Pomona.	Los Angeles.	67.0	—	98	21†	41	11	50												

TABLE 1.—Climatological data for June, 1913. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>California—Continued.</i>																				
Santa Monica.....	Los Angeles.....	110	28	59.4	- 5.7	80	29	47	11	28	0.63	+ 0.63	0.63	0	1	14	9	7	w.	F. E. Hill.
Santa Rosa.....	Sonoma.....	181	24	61.0	- 4.2	93	30	35	20	54	0.05	- 0.20	0.05	0	1	14	6	10	s.	Southern Pacific Co.
Selma **.....	Fresno.....	311	27	66.2	- 12.0	97	30	45	7†	..	0.00	- 0.04	0.00	0	0	28	0	2	..	Do.
Seven Oaks.....	San Bernardino.....	5,000	3	55.4	..	80	22†	31	27	37	0.11	..	0.11	0	1	16	5	9	w.	M. Lewis.
Sierra Madre.....	Los Angeles.....	1,400	16	65.4	- 1.6	92	21	48	11	36	1.48	+ 1.23	1.03	0	2	10	13	7	s.	Mrs. A. E. Gregory.
Sierraville.....	Sierra.....	5,000	3	51.6	..	79	3	28	20	39	0.51	..	0.35	0	3	10	13	7	sw.	C. D. Johnson.
Sisson.....	Siskiyou.....	3,555	24	56.6	- 5.9	81	1	31	13	35	2.20	+ 1.56	0.94	0	5	18	6	6	n.	Southern Pacific Co.
Soledad **.....	Monterey.....	188	39	66.1	+ 0.6	83	10†	51	18	..	0.10	+ 0.05	0.10	0	1	19	0	11	n.	Do.
Sonora.....	Tuolumne.....	1,825	2	66.4	..	89	21	46	27	37	0.18	- 0.13	0.18	0	1	19	11	0	w.	Chas. P. Jones.
Southeast Farallon.....	San Francisco.....	30	10	54.6	+ 2.3	62	23	49	6	10	0.02	- 0.14	0.02	0	1	14	7	9	nnw.	U. S. Weather Bureau.
Springville.....	Tulare.....	4,000	6	59.8	..	85	30	34	10	37	0.85	..	0.30	0	5	23	1	6	..	D. L. Wishon.
Squirrel Inn.....	San Bernardino.....	5,280	3	56.8	..	82	21	35	10	29	1.13	..	0.73	0	2	20	0	10	sw.	A. D. Frantz.
Stanwood.....	Butte.....	2,140	9	64.6	..	82	9	40	21	35	1.92	..	0.78	0	9	20	0	10	n.	Cal. Gas & Electric Co.
Stirling City.....	do.....	3,525	9	64.5	..	88	19	40	13†	42	0.15	..	0.10	0	2	15	8	7	s.	Butte County R. R. Co.
Stockton (S. H.).....	San Joaquin.....	23	42	68.0	- 1.9	91	20†	49	10	35	0.00	- 0.12	0.00	0	0	23	6	1	nw.	State Hospital.
Storey.....	Madera.....	296	13	69.0	- 3.3	97	21	48	20†	43	0.00	- 0.01	0.00	0	0	28	0	2	..	Santa Fe Co.
Suisun **.....	Solano.....	20	33	71.3	+ 3.0	99	30	45	3†	..	0.00	- 0.16	0.06	0	1	30	0	0	sw.	Southern Pacific Co.
Sulphur Banks.....	Lake.....	1,350	1	65.9	..	90	1†	48	9†	35	0.27	..	0.27	0	1	18	11	1	w.	L. S. Lorenzen.
Summit.....	Placer.....	7,017	40	48.8	- 4.4	67	21	31	27	28	0.05	- 0.59	0.05	0	1	8	0	2	s.	Southern Pacific Co.
Susanville.....	Lassen.....	4,175	24	61.9	- 0.5	92	4	36	20	52	2.17	+ 1.67	1.40	0	7	13	8	9	..	C. M. Benty.
Tamarack.....	Alpine.....	5,000	7	46.6	..	66	13†	30	5†	35	7.44	+ 6.43	1.30	3.0	11	7	10	13	sw.	Cal. Gas & Electric Co...
Tehachapi **.....	Kern.....	3,964	26	66.8	- 2.6	80	60	67	40	10	0.52	+ 0.44	0.42	0	2	20	0	0	..	Southern Pacific Co.
Tehama.....	Tehama.....	220	42	74.2	- 3.4	99	1	54	10	..	0.45	+ 0.18	0.30	0	3	23	3	4	s.	Do.
Tejon Rancho.....	Kern.....	1,500	10	69.9	..	96	30	48	20	42	0.56	..	0.37	0	2	8	20	2	..	S. E. Bailey.
Three Rivers.....	Tulare.....	870	3	69.9	..	96	30	48	20	42	0.56	..	0.37	0	2	8	20	2	sw.	J. H. Pierce.
Towle.....	Placer.....	3,704	27	64.4	+ 1.4	81	22	46	8	26	0.47	- 0.56	0.40	0	4	22	6	2	ne.	Southern Pacific Co.
Tracy **.....	San Joaquin.....	64	33	76.0	+ 0.1	96	30	60	8†	..	0.00	- 0.17	0.00	0	0	..	..	..	..	Do.
Ukiah.....	Mendocino.....	620	20	64.4	- 1.0	92	29	39	10	49	0.03	- 0.31	0.03	0	1	18	11	1	nw.	Dr. Geo. McCowen.
Upper Lake.....	Lake.....	1,350	28	64.0	- 2.7	91	29	37	10	44	0.01	- 0.24	0.01	0	1	21	7	2	sw.	C. M. Hammond.
Vacaville.....	Solano.....	175	25	68.4	- 2.6	97	20†	40	10	50	T.	- 0.16	T.	0	0	16	14	0	nw.	G. O. Coburn.
Valley Springs **.....	Calaveras.....	673	24	71.1	- 3.0	97	20	57	10	..	0.00	- 0.27	0.00	0	0	20	10	0	..	Southern Pacific Co.
Visalia.....	Tulare.....	334	25	63.4	- 9.9	85	30	37	1	39	0.28	+ 0.18	0.28	0	1	30	0	0	..	Santa Fe Co.
Warner Springs.....	San Diego.....	3,165	5	63.6	..	92	21	39	10	39	0.13	..	0.13	0	1	22	8	0	..	Mrs. F. S. Sandford.
Wasco.....	Kern.....	336	13	78.1	+ 3.1	109	24	54	2	41	0.00	0.00	0.00	0	0	30	0	0	nw.	Santa Fe Co.
Watsonville.....	Santa Cruz.....	23	17	60.8	- 1.6	97	22	36	10	50	0.16	+ 0.02	0.07	0	3	11	12	7	w.	Spreckels Sugar Co.
Weaverville.....	Trinity.....	2,162	1	61.0	..	89	2	37	10†	40	0.93	+ 0.16	0.33	0	8	11	15	4	..	U. S. Forest Service.
Weitchpec.....	Humboldt.....	1,700	3	59.0	..	89	1	37	9	38	2.46	..	0.94	0	9	12	14	4	s.	M. E. Lathrop.
Westley **.....	Stanislaus.....	90	24	75.7	- 1.9	96	21	50	15	..	0.00	- 0.06	0.00	0	0	28	0	2	n.	Southern Pacific Co.
Wheatland.....	Yuba.....	84	26	69.8	- 1.6	94	30	48	10	37	0.09	- 0.19	0.07	0	2	16	8	6	s.	Wm. Lumbard.
Willows.....	Glenn.....	136	34	73.4	- 3.5	97	12	47	10	44	0.92	+ 0.74	0.87	0	3	27	3	0	s.	E. C. Mills.
Yorba Linda.....	Orange.....	..	..	66.4	..	98	21†	40	19	52	0.10	..	0.07	0	2	12	11	7	w.	S. J. Walker.
Yosemite.....	Mariposa.....	3,945	9	54.3	..	87	21†	22	10	59	3.01	..	0.95	0	9	16	3	11	s.	J. P. Kelly.

*, b, o, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for June, 1913. District No. 11, California.*

TABLE 2.—*Daily precipitation for June, 1913. District No. 11—Continued.*

TABLE 2.—*Daily precipitation for June, 1913. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																													Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
California—Contd.																																	
Nevada City	Sacramento	.48	T.																														1.12
Nevis	do				.03		T.		T.	T.																					0.68		
Newhall	Coast																														0.18		
Newman	San Joaquin																														0.10		
North Bloomfield	Sacramento	.20																													0.20		
North Fork	San Joaquin																														1.38		
North Lakeport	Coast																														T.		
Oakdale	San Joaquin																														.59		
Oak Grove	Coast																																
Oakland	do						T.	T.																							T.		
Oakville	do																														T.		
Oceanside	do																														T.		
Ojai Valley	Sacramento																																
Orland	Klamath	T.																													0.16		
Orleans	T.	.70																													0.85		
Oroville (near)	Sacramento	.20																													0.63		
Ozona	Coast																														2.76		
Palermo	Sacramento																														0.44		
Palm Springs	Desert																														0.72		
Parkfield	Coast																														0.25		
Pasadena	do																														0.00		
Paso Robles	do																														0.57		
Peachland	do																														0.76		
Petaluma	do																														0.07		
Phoenix Dam	San Joaquin																														0.01		
Pilot Creek	Sacramento																														1.01		
Pinchot	Coast																																
Pine Crest	do																														0.87		
Placerville	Sacramento																														0.02		
Point Lobos	Coast																														0.01		
Point Loma	do	.01	.01	.01																										0.16			
Point Reyes	do																														0.04		
Pomona	do																														0.19		
Porterville	San Joaquin																														0.10		
Priest Valley	Coast						T.	.10																						0.21			
Quincy	Sacramento																														0.60		
Red Bluff	do																														0.54		
Redding	do	.08																													1.45		
Redlands	Coast																														0.21		
Reedley	San Joaquin																														0.00		
Repressa	Sacramento																														0.00		
Rialto (near)	Coast	T.	T.																												1.11		
Rio Vista	Sacramento																														0.00		
Riverside	Coast	.01																													0.18		
Rocklin	Sacramento																														T.		
Rohnerville	Coast																														0.06		
Ruth	do	.38																													1.46		
Sacramento	Sacramento																														0.11		
St. Helena	Coast																														0.25		
Salinas	T.																														0.33		
San Bernardino	do																														0.39		
San Diego	do																														0.09		
San Francisco	do																														0.02		
San Jacinto	do																														0.16		
San Jose	do	.01																													0.16		
San Luis Obispo	do																														0.59		
San Mateo	do																														0.00		
San Miguel	do																														0.02		
San Miguel Island	Ocean																														0.02		
Sanger	San Joaquin																														0.12		
Santa Ana River	Coast																														0.20		
Santa Barbara	do																														0.50		
Santa Clara	T.						T.																								0.25		
Santa Cruz	do																														1.00		
Santa Margarita	do																														0.63		
Santa Monica	do																														0.05		
Santa Rosa	do																														0.00		
Sausalito	do																														0.00		
Selma	San Joaquin																														0.00		
Seven Oaks	Coast																														0.11		
Shively	do																														1.30		
Sierra Madre	do																														1.48		
Sierraville	Mount'n Lakes	.06	.10	.35																										0.51			
Sisquoc Ranch	Coast																														0.38		
Soleedad	Sacramento																														2.30		
Sonora	Coast	T.																													0.18		
Southeast Farallon	San Joaquin	.18	T.																												0.02		
Spreckels	Coast																														0.00		
Springville	San Joaquin	.30	.10	.15																													

TABLE 2.—*Daily precipitation for June, 1913. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																													Total.					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
<i>California—Contd.</i>																																				
Upper Mattole.....	Coast.....								.04										.06	.01	T.	T.											0.86			
Vacaville.....	Sacramento.....																																	T.		
Valley Springs.....	San Joaquin.....																																		0.00	
Visalia.....	do.....																																		0.28	
Warner Springs.....	Coast.....																																		0.13	
Wasco.....	San Joaquin.....																																		0.00	
Watsonville.....	Coast.....								.03																										0.16	
Weaverville.....	do.....	.04	T.																																	0.93
Weitchpec.....	Klamath.....	T.	.04																																	2.46
West Branch.....	Sacramento.....	.20																																		1.49
Westley.....	San Joaquin.....																																			0.00
West Point.....	do.....																																			
West Saticoy.....	Coast.....																																			
Wheatland.....	Sacramento.....	T.																																		0.09
Willows.....	do.....	T.																																		0.92
Yorba Linda.....	Coast.....																																			0.10
Yosemite.....	San Joaquin.....	.49	.04	.18	.09	.05	.70			.50																									3.01	

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures for June, 1913. District No. 11, California.

Date.	Lakeview, Oreg.		California.																										
			Alturas.		Barstow.		Brawley.		Colusa.		Eureka.		Fresno.		Independ- ence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porter- ville.		Red Bluff.				
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.					
1.....	77	45	86	43	94	58	80	46	96	64	89	58	58	51	90	67	73	48	64	55	65	49	83	54	68	58	95	69	
2.....	79	46	85	45	92	60	78	45	97	60	87	56	55	49	89	59	72	52	62	55	65	49	79	46	93	57	88	62	
3.....	77	46	86	42	90	54	81	45	96	67	87	58	54	50	90	61	80	50	64	55	69	51	81	47	92	63	90	62	
4.....	75	45	82	46	87	56	85	44	93	64	87	56	54	47	89	60	79	52	65	56	69	52	80	48	92	63	90	62	
5.....	76	43	85	42	88	54	80	45	95	64	89	57	56	45	91	59	78	54	69	55	68	57	80	50	94	61	92	66	
6.....	77	45	81	49	90	50	75	40	96	74	85	55	53	47	93	61	79	53	72	56	68	52	81	54	94	63	90	65	
7.....	71	50	80	52	91	54	70	39	98	63	79	51	64	49	87	54	81	50	70	55	58	48	75	46	91	60	79	52	
8.....	62	40	69	43	88	50	65	39	97	62	78	50	58	49	77	56	80	48	66	56	59	42	66	42	91	61	70	61	
9.....	55	36	60	41	75	48	70	35	86	51	79	49	56	47	72	53	68	56	65	54	51	67	74	54	72	52	72	52	
10....	63	35	68	43	77	50	73	38	83	59	80	49	57	46	77	50	70	45	56	58	64	43	72	35	78	48	84	50	
11....	71	34	77	38	87	51	75	40	91	61	86	49	60	50	86	56	82	45	72	53	71	52	79	34	87	56	89	58	
12....	74	42	80	42	93	52	70	40	97	58	91	58	63	52	93	65	85	48	76	53	69	52	85	41	96	61	91	65	
13....	67	49	73	46	97	60	71	38	98	72	87	55	60	50	89	60	88	54	71	57	55	45	73	44	94	60	82	63	
14....	64	39	72	41	96	59	72	35	98	64	78	50	60	46	84	53	89	50	74	57	62	43	77	37	94	55	82	58	
15....	69	41	75	32	95	60	71	37	98	64	84	54	61	48	88	56	87	56	74	57	64	48	79	36	94	54	85	58	
16....	70	37	79	36	91	55	72	39	96	63	85	55	59	50	86	54	86	51	69	57	68	51	79	35	85	53	86	57	
17....	72	39	79	38	95	51	60	39	97	75	86	57	61	48	89	58	86	51	72	56	65	47	77	41	92	54	84	62	
18....	70	37	74	36	95	50	58	38	101	63	77	54	59	51	85	57	86	52	72	52	54	45	76	41	93	55	76	60	
19....	55	37	65	37	91	56	64	45	103	64	76	54	62	51	82	57	86	55	77	56	60	44	71	46	93	54	74	56	
20....	69	30	80	29	96	60	73	40	104	63	89	56	63	47	90	54	88	56	83	58	70	55	44	82	34	90	52	87	55
21....	71	42	79	43	101	63	73	45	107	67	89	65	65	54	96	60	92	58	85	59	71	57	84	44	98	55	88	67	
22....	65	47	72	53	101	65	65	45	102	68	88	68	65	57	86	65	90	56	76	57	62	53	99	57	82	66	78	66	
23....	65	43	71	52	90	64	66	43	100	62	82	65	60	57	87	61	88	58	74	58	62	52	77	54	93	59	86	64	
24....	57	46	64	51	95	65	67	44	100	65	82	60	61	55	86	61	88	59	72	60	56	47	72	53	91	60	78	66	
25....	58	41	64	45	85	60	63	38	95	69	80	60	61	52	79	57	81	55	66	60	55	46	65	48	89	56	75	58	
Mns....	67.3	41.3	74.3	42.7	90.9	56.7	71.1	41.1	96.8	64.1	83.9	55.8	59.9	50.7	86.0	58.1	82.0	52.0	72.3	56.4	63.8	49.6	76.7	43.9	90.0	56.7	83.3	60.4	

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Fran- cisco.		San Jose.		San Luis Obispo.		Santa Bar- bara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1.....	69	50	76	57	63	57	59	51	75	53	67	52	60	54	67	52	81	46	81	57	58	40	-----	80	29	
2.....	71	53	81	54	63	58	60	51	74	56	66	54	59	54	68	52	80	51	81	54	59	40	-----	82	30	
3.....	74	56	80	54	65	56	61	51	75	55	67	54	62	55	69	50	80	49	83	54	64	42	-----	78	30	
4.....	71	56	81	53	66	58	61	51	76	54	62	56	64	74	48	45	84	56	58	40	-----	79	30			
5.....	73	53	80	53	66	58	59	50	77	53	62	53	61	61	76	47	74	44	85	56	56	41	-----	80	30	
6.....	81	52	75	52	66	60	55	50	71	51	66	53	60	57	72	49	77	51	83	54	57	43	-----	80	30	
7.....	82	51	76	49	65	59	61	51	68	51	66	52	60	50	72	49	75	46	75	50	57	43	-----	79	29	
8.....	75	53	70	52	63	58	59	51	67	52	66	50	64	53	74	42	66	45	70	55	57	38	-----	78	26	
9.....	67	53	69	48	64	58	59	51	65	42	52	66	50	72	36	67	42	68	50	50	48	34	-----	76	30	
10....	71	51	77	48	65	57	61	50	73	46	63	44	66	48	77	37	65	42	80	49	48	33	-----	65	22	
11....	82	45	84	52	65	56	64	50	78	45	68	44	68	45	78	42	72	43	85	52	62	36	-----	79	25	
12....	87	50	86	58	67	62	50	77	48	74	44	70	50	83	48	79	48	87	57	66	44	-----	80	30		
13....	85	53	74	53	66	58	62	52	71	53	78	50	65	49	71	45	84	66	61	54	40	-----	84	30		
14....	87	55	79	49	66	58	65	52	71	44	72	44	65	55	78	40	66	37	80	51	58	42	-----	83	30	
15....	85	54	78	51	68	61	51	70	42	72	46	68	51	79	41	63	36	81	51	61	42	-----	80	28		
16....	90	53	82	52	67	58	65	52	77	46	72															